

REMARKS

Applicant submits this Response in reply to the Official Action dated July 21, 2009. Applicant believes that the Response is fully responsive to the Official Action for at least the reasons set forth herein.

Claims 2-8 and 12-23 are pending in the application, with claims 20 and 23 being independent claims. Claims 1 and 9-11 have previously been canceled. Claims 20 and 23 are amended to recite the "dummy bursts containing no data", to emphasize the characteristics of the dummy bursts. Support for this amendment can be found on page 8, line 12, (paragraph [0044] of the application as published). No new matter is being added.

Rejection of Claims Under 35 U.S.C. §103

Claims 2-8 and 12-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mege et al., U.S. Pat. Pub. 2001/0005406 (hereinafter "Mege") in view of Critchlow, U.S. Patent No. 5,276,706, and further in view of Zhou, U.S. Patent No. 6,859,491.

Applicant respectfully disagrees with the rejection and traverses with at least the following analysis.

The Office Action relies on a combination of the previously cited Mege and Critchlow with the fresh addition of Zhou. The Examiner acknowledges that Mege and Critchlow do not show the feature that the "training sequences include eight training sequences associated with data bursts and a ninth training sequence associated with dummy bursts", as recited in the claims of the present invention. Zhou is relied on to supply this missing feature.

The Examiner asserts that Zhou discloses estimating the timing position of data bursts which include a number of bits comprising training sequences in a fixed location, and further

discloses that there are five kinds of bursts and a "normal burst" structure, which is described in Column 3 at lines 38-43, including a training sequence.

The five standard burst types are listed in Zhou, in column 3, lines 19-27, as:

- normal burst
- synchronization burst
- frequency correction burst
- access burst
- dummy burst

These five standard burst types include both normal and dummy bursts. Normal bursts carry data and dummy bursts do not. Zhou does not describe the role or structure of a dummy burst because a dummy burst is not being used in Zhou and the dummy burst is not of interest in the Zhou disclosure. Instead, Zhou makes only passing reference to dummy bursts as one of five standard burst types. Zhou instead is using "normal bursts".

A dummy burst is used, for example, when there is no traffic on a traffic channel, or in empty time slots of a signaling channel. The dummy burst primarily marks a frequency of a base station so that a mobile device, or "receiving station", can find it. Once the mobile device has found the frequency, the device needs to set up transmission. Zhou describes this later phase, occurring after the dummy burst has been detected and the mobile device has found the frequency, in Column 3 lines 29-37:

"The receiving station therefore initially seeks a training sequence of an access burst. Thereafter, the message includes a plurality of normal data bursts, and the receiving station seeks a training sequence of a normal data burst."

An access burst is another of the five standard burst types disclosed by Zhou, in addition to a normal burst. The passage quoted above from Zhou makes no mention of a dummy burst at all, and certainly not of a training sequence in relation to a dummy burst. Once a receiving

station has located the frequency, it uses the usual data bursts, containing training sequences, to set up transmission. Zhou makes no mention of dummy bursts in this connection. Indeed Zhou makes very little mention of dummy bursts altogether as Zhou is more concerned with swapping the order of correlation and equalization.

Crucially, with respect to the present invention, a dummy burst is significantly different from a normal burst. When Zhou describes a "normal burst", it is specifically not describing a dummy burst. A dummy burst does not contain data, would not be described as a "data burst" and therefore does not contain a training sequence of any type. A dummy burst is structured so that it will not be confused with a signaling burst.

The applicant notes that US Patent No. 5,583,870 (see accompanying disclosure statement) in contrast recognizes that the dummy bursts can be used for other purposes but only if signaling data is added to them. This is mentioned for example in Column 3, lines 26-34.

The applicant's invention is distinct because firstly it uses the dummy bursts for signal regeneration, and thus the dummy bursts are used outside their conventional role of marking an unused frequency or timeslot. Secondly, the present invention performs signal regeneration without modifying the conventional structure of the dummy burst to include data. In embodiments of the applicant's invention as recited in the claims amended herein, the dummy bursts contain no data.

Accordingly, Applicant respectfully submits that independent claims 20 and 23 are patentable over the cited references at least because the references fail to teach all of the limitations of the claims.

Claims 2-8, 12-19, 21 and 22 are patentable over the cited references based at least upon the above-identified analysis and in view of their dependency, whether directly or indirectly, from claims 20 and 23.

Accordingly, Applicant respectfully submits that all of the pending claims are patentable over the cited references.

Based upon the foregoing, Applicant respectfully requests the Examiner to withdraw the rejection of claims 2-8 and 12-23 pursuant to 35 U.S.C. § 103(a).

In view of the above, it is respectfully submitted that all of the claims in the application contain patentable subject matter and a Notice of Allowance is respectfully solicited. Should the Examiner believe that an interview would expedite prosecution of this matter, she is kindly requested to contact the undersigned.

Respectfully submitted,



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